

What is claimed is:

1. A method of identifying individuals susceptible to incurring a disease transition, said method including:
  - (A) identifying a population of individuals;
  - (B) defining a disease transition;
  - (C) defining one or more variables representing medical information collected from said population of individuals, wherein each of said one or more variables is a candidate variable operating to predict said disease transition to various degrees of accuracy;
  - (D) selectively choosing variables from said candidate variables so as to form a set of chosen variables, wherein said choosing includes using a logistic regression technique, and wherein said choosing further includes using information stored in an electronic database to determine the degree of accuracy to which each said candidate variable acts to predict said disease transition for said population of individuals; and
  - (E) using said set of chosen variables in a mathematical model to predict said disease transition for said population of individuals.
2. The method of claim 1 wherein (A), (B), (C), (D), and (E) are repeated in order from time to time in response to changes in the information stored in said electronic database.
3. The method of claim 1 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of a disease, to a state in which said individual requires hospitalization for a symptom of a disease.
4. The method of claim 1 wherein said disease transition is further defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of diabetes, to a state in which said individual requires hospitalization for a symptom of diabetes.
5. A method of identifying individuals susceptible to incurring a disease transition, said method including:
  - (A) identifying a population of individuals;
  - (B) defining a disease transition;

(C) defining one or more variables representing medical information collected from said population of individuals, wherein each of said one or more variables is a candidate variable operating to predict said disease transition to various degrees of accuracy;

(D) creating a mathematical model wherein said model contains one or more variables from said set of candidate variables, and wherein said model is capable of determining a likelihood that individuals from said population of individuals will undergo said disease transition; and

(E) refining said model by performing a logistic regression technique using information stored in an electronic database, so as to render said model operative to predict said disease transition for said population of individuals.

6. The method of claim 5 wherein (A), (B), (C), (D), and (E) are repeated in order from time to time in response to changes in the information stored in said electronic database.
7. The method of claim 5 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of a disease, to a state in which said individual requires hospitalization for a symptom of a disease.
8. The method of claim 5 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of diabetes, to a state in which said individual requires hospitalization for a symptom of diabetes.
9. A method of identifying individuals susceptible to incurring a disease transition, said method including:
  - (A) identifying a population of individuals;
  - (B) defining a disease transition;
  - (C) defining one or more variables representing medical information collected from said population of individuals, wherein each of said one or more variables is a candidate variable operative to predict said disease transition to various degrees of accuracy;
  - (D) querying an electronic database to determine a numerical value for each variable in said set of candidate variables, and for each individual in said population of individuals;

- (E) establishing one or more criteria for said candidate variables, wherein said criteria are mathematically related to a metric that can be calculated for a candidate variable, and that reflects the contribution of a candidate variable to the prediction of said transition;
- (F) formulating a mathematical model relating said candidate variables to said disease transition;
- (G) using said numerical values in said mathematical model to determine said metric for each candidate variable of said model;
- (H) removing candidate variables from said model based on said one or more criteria;
- (I) repeating (F), (G), and (H) in order until no variables are removed from said set of candidate variables; and
- (J) using said mathematical model to identify said disease transition for said population of individuals.
10. The method of claim 9 wherein (A), (B), (C), (D), (E), (F), (G), (H), (I), and (J) are repeated in order from time to time in response to changes in the information stored in said electronic database.
11. The method of claim 9 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of a disease, to a state in which said individual requires hospitalization for a symptom of a disease.
12. The method of claim 9 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of diabetes, to a state in which said individual requires hospitalization for a symptom of diabetes.
13. A method of verifying data used to identify individuals susceptible to incurring a disease transition, said method including:
- writing patient data to an electronic file for reading by a browser program; and
- writing data location information to comment fields in said electronic file, wherein said data location information is capable of specifying the location of said patient data within an electronic database, and wherein said comment fields do not operate to instruct said browser program to display said data location information.

14. The method of claim 13 wherein said patient data and said data location information are written to said electronic file in Hyper Text Markup Language.

15. A method of verifying data used to identify individuals susceptible to incurring a disease transition, said method including:

receiving an electronic file containing patient data for reading by a browser program, and further containing data location information within comment fields, wherein said data location information is capable of specifying the location of said patient data within an electronic database, and wherein said comment fields do not operate to instruct said browser program to display said data location information;

reading said data location information from said comment fields, and said patient data from said electronic file;

writing said patient data to an electronic verification database in a manner determined by said data location information; and

querying a patient medical information database, at least a portion of which having the same structure as said electronic verification database, so as to compare the contents of a particular location within said electronic verification database to the contents of the same location within said same structure of said patient medical information database.

16. The method of claim 15 wherein said patient data and said data location information are written to said electronic file in Hyper Text Markup Language.

17. A computer-readable memory that can be used to direct a computer to function in a specified manner, comprising:

(A) an electronic database configured to store electronic information;

(B) instructions to identify a population of individuals;

(C) instructions to define a disease transition;

(D) instructions to define one or more variables representing medical information collected from said population of individuals, wherein each of said one or more variables is a candidate variable operating to predict said disease transition to various degrees of accuracy;

(E) instructions to selectively choose variables from said candidate variables so as to form a set of chosen variables, wherein said instructions to selectively choose include instructions to use a logistic regression technique, and wherein said instructions to

selectively choose further include instructions to use information stored in said electronic database to determine the degree of accuracy to which each said candidate variable acts to predict said disease transition for said population of individuals; and  
(F) instructions to use said set of chosen variables in a mathematical model to predict said disease transition for said population of individuals.

18. The computer-readable memory of claim 17 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of a disease, to a state in which said individual requires hospitalization for a symptom of a disease.
19. The computer-readable memory of claim 17 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of diabetes, to a state in which said individual requires hospitalization for a symptom of diabetes.
20. A computer-readable memory that can be used to direct a computer to function in a specified manner, comprising:
  - (A) an electronic database configured to store electronic information;
  - (B) instructions to identify a population of individuals;
  - (C) instructions to define a disease transition;
  - (D) instructions to define one or more variables representing medical information collected from said population of individuals, wherein each of said one or more variables is a candidate variable operating to predict said disease transition to various degrees of accuracy;
  - (E) instructions to create a mathematical model wherein said model contains one or more variables from said set of candidate variables, and wherein said model is capable of determining a likelihood that individuals from said population of individuals will undergo said disease transition; and
  - (F) instructions to refine said model by performing a logistic regression technique using information stored in said electronic database, so as to render said model operative to predict said disease transition for said population of individuals.

21. The computer-readable memory of claim 20 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of a disease, to a state in which said individual requires hospitalization for a symptom of a disease.
22. The computer-readable memory of claim 20 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of diabetes, to a state in which said individual requires hospitalization for a symptom of diabetes.
23. A computer-readable memory that can be used to direct a computer to function in a specified manner, comprising:
  - (A) an electronic database configured to store electronic information;
  - (B) instructions to identify a population of individuals;
  - (C) instructions to define a disease transition;
  - (D) instructions to define one or more variables representing medical information collected from said population of individuals, wherein each of said one or more variables is a candidate variable operative to predict said disease transition to various degrees of accuracy;
  - (E) instructions to query said electronic database to determine a numerical value for each variable in said set of candidate variables, and for each individual in said population of individuals;
  - (F) instructions to establish one or more criteria for said candidate variables, wherein said criteria are mathematically related to a metric that can be calculated for a candidate variable, and that reflects the contribution of a candidate variable to the prediction of said transition;
  - (G) instructions to formulate a mathematical model relating said candidate variables to said disease transition;
  - (H) instructions to use said numerical values in said mathematical model to determine said metric for each candidate variable of said model;
  - (I) instructions to remove candidate variables from said model based on said one or more criteria;
  - (J) instructions to execute (G), (H), and (I) repeatedly in order until no variables are removed from said set of candidate variables; and

(K) instructions to use said mathematical model to identify said disease transition for said population of individuals.

24. The computer-readable memory of claim 23 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of a disease, to a state in which said individual requires hospitalization for a symptom of a disease.
25. The computer-readable memory of claim 23 wherein said disease transition is defined, for an individual, as converting from a state in which said individual does not require hospitalization for a symptom of diabetes, to a state in which said individual requires hospitalization for a symptom of diabetes.
26. A computer-readable memory that can be used to direct a computer to function in a specified manner, comprising:  
instructions to write patient data to an electronic file for reading by a browser program;  
and  
instructions to write data location information to comment fields in said electronic file, wherein said data location information is capable of specifying the location of said patient data within an electronic database, and wherein said comment fields do not operate to instruct said browser program to display said data location information.
27. The computer-readable memory of claim 26 wherein said patient data and said data location information are written to said electronic file in Hyper Text Markup Language.
28. A computer-readable memory that can be used to direct a computer to function in a specified manner, comprising:  
instructions to receive an electronic file containing patient data for reading by a browser program, and further containing data location information within comment fields, wherein said data location information is capable of specifying the location of said patient data within an electronic database, and wherein said comment fields do not operate to instruct said browser program to display said data location information;  
instructions to read said data location information from said comment fields, and said patient data from said electronic file;

instructions to write said patient data to an electronic verification database in a manner determined by said data location information; and

instructions to query a patient medical information database, at least a portion of which having the same structure as said electronic verification database, so as to compare the contents of a particular location within said electronic verification database to the contents of the same location within said same structure of said patient medical information database.

29. The computer-readable memory of claim 28 wherein said patient data and said data location information are written to said electronic file in Hyper Text Markup Language.